

*Cost Effectiveness Measurement Report
Periods Ended December 31, 2005
July 24th, 2006*

Summary

For the one-year period ended December 31, 2005, CalPERS' total fund generated a return of 11.1% relative to its policy return¹ of 8.9%. Its implementation value-added was 2.2%. In the years that CalPERS has participated in the Cost Effectiveness Measurement, Inc. (CEM) study, the largest difference between it and its peers in the past was its more diversified asset allocation. Over time, its peers have become equally as diversified and there is little difference today in the percent allocated to the broad asset classes on a policy basis between CalPERS and its peers. There are differences, however, between CalPERS' total fund benchmarks and the indices utilized by the other sponsors in the peer group, particularly within the AIM and real estate segments. Relative to its peers, CalPERS' total return of 11.1% outperformed both the peer universe average return of 10.6% and the median return of 10.2%. Its implementation value-added topped both the median and average in its peer group for both 2005 and the 5 years ending 2005.

CalPERS' total return of 5.76% over the last five years ranked in the 51st percentile (second quartile)² versus its peers, and it outperformed its policy objective of 4.75%. Over the five-year period, CalPERS has added 1.0% per annum in value over its policy benchmark, higher than the average of 0.6% for the peer group, with a slightly higher level of implementation risk (1.4% vs. peer average of 1.3%). Value added totaled approximately \$1.7 billion a year or \$8.5 billion for the five-year period.

CalPERS incurred 23.3 basis points or \$454.6 million in expenses for the year which was 6.2 basis points lower than CEM's benchmark cost, a savings of \$120.2 million. The benchmark is based on the costs of the median peer fund for service adjusted for plan size and country of origin. The lower cost can be quantified by CalPERS' lower allocation to external active managers than its peers (CalPERS, 30% vs. peer average, 47%), which accounted for a savings of 3.1 basis point relative to its peers. Other implementation differences saved 1.1 basis points. CalPERS also paid less for services such as external management and oversight which saved 2.0 basis points. The 23.3 basis points in expenses were below the mean and median for the peer group, at 26.3 and 23.6 basis points respectively.

Cost Effectiveness Measurement, Inc. (CEM) is a service company providing investment performance data on pension plans which cover about 25% of defined benefit assets in the United States. Published annually, CEM's report provides comparative and

¹ The total fund policy benchmarks utilized in the CEM study are not necessarily representative of the benchmarks reported by Wilshire Associates, Inc.

² In this report 100% is the top percentile and 1% is the bottom percentile.

explanatory information and serves as a management information tool. CEM has constructed a universe of 10 peer plan sponsors with assets averaging \$79.4 billion against which to compare CalPERS. The report examines value-added return within the context of both the cost expended and the risk incurred to achieve that return.

Discussion

CalPERS' total fund return is a function of the impact of investment policy, which is set by the CalPERS Investment Committee, and the impact of the implementation of that policy by the Staff. CalPERS' total return of 11.1% for the year ranks in the 61st percentile in CEM's peer group. CalPERS and its peers invest in similar asset classes, though they differ in their respective benchmarks. CalPERS' policy return of 8.9% ranks in the 62nd percentile of its peers, due to incrementally higher benchmark returns for CalPERS in various asset classes versus its peers' benchmark returns in those same asset classes. CalPERS' policy benchmark return and those of its peers are determined by weighting the individual asset class benchmark returns by the asset allocation target percentage weights to those asset classes.

During 2005, the CalPERS U.S fixed income benchmark returned 3.7% versus the peer average benchmark return of 2.6%, which positively affected CalPERS' policy return and rank for the year. CalPERS' peer sponsors also utilized easier benchmarks for real estate excluding REITs as CalPERS' benchmark return for the calendar year 2005 was 19.2% vs. its peers' benchmark return of 16.6%. CalPERS' Implementation Value Added (the difference between its total return and policy return) of 2.2% compared to its peers was at the 57th percentile versus the 52nd in 2004.

Asset Allocation and Benchmark Return

CalPERS' overall asset allocation policy does not differ significantly from the other plan sponsors. Exhibit I below shows CalPERS' broad asset allocation policy targets compared to its peers for 2005.

Exhibit I Comparison of Asset Allocation Policies 2005

	<u>CalPERS</u>	<u>Peers</u>	<u>Difference</u>
Domestic Equity	40.0%	40.0%	0.0%
International Equity	20.0%	19.1%	0.9%
Fixed Income	26.0%	26.8%	-0.8%
Real Estate	8.0%	6.6%	1.4%
AIM	6.0%	7.5%	-1.5%
Total	100.0%	100.0%	

While there are no significant differences between the broad asset class policy allocations, there are some significant differences in the benchmark returns, particularly for the AIM and the real estate programs, as shown in Exhibit II. CalPERS utilizes a

custom Venture Economics benchmark based on actual private equity values, whereas, the majority of its peer sponsors use proxy benchmarks based on public equity indices. CalPERS' benchmark is truly representative of the AIM asset class performance while the peer benchmark is misleading in using public equity as a proxy.

Exhibit II Comparison of Benchmark Returns 2005

	<u>CalPERS</u>	<u>Peers</u>	<u>Difference</u>
Domestic Equity	6.1%	6.2%	-0.1%
International Equity - Developed	16.4%	16.7%	-0.3%
International Equity - Emerging	34.4%	34.3%	0.1%
Fixed Income - U.S.	3.7%	2.6% *	1.1%
Fixed Income - Foreign	-8.9% **	-0.5% ***	-8.5%
Real Estate	19.2%	15.9%	3.3%
AIM	18.0%	15.0%	3.0%
Total	8.9%	8.6%	0.3%

* Includes inflation-indexed, high yield, mortgages, other, and cash

** Unhedged

** Includes global and emerging fixed income

The primary divergence in benchmark returns occurred in the international fixed income, real estate and AIM assets. The large difference in foreign fixed income had a small effect on the policy return because of the relatively smaller policy allocations for both CalPERS and the peer group. Additionally, CalPERS does not have a policy weighting for emerging fixed income, which enjoyed a strong year in 2005 and subsequently enhanced the peer return in foreign fixed income. As peer benchmark returns were only slightly higher in the domestic equity and fixed income asset classes, the much higher real estate and AIM benchmarks drove the policy return difference of 0.3% in 2005. Differences in benchmarks were the main reason for the CalPERS' lower policy return over the last 5 years.

Implementation Results

For the year ended December 31, 2005, CalPERS' implementation strategy added 2.2% of value relative to its policy return, while its peers added 2.1% of value on average. As a result, CalPERS ranked in the second quartile among its peers.

For the calendar year 2005, all asset classes met or exceeded the performance of their respective benchmarks as shown below.

³ Real estate benchmarks for the peer sponsors were not clearly specified in the CEM report.

Exhibit III
Asset Class Returns
2005

	<u>Actual Return</u>	<u>Benchmark Return</u>	<u>Difference</u>
Domestic Equity	6.5%	6.1%	0.4%
International Equity - Developed	16.9%	16.4%	0.5%
International Equity - Emerging	34.7%	34.4%	0.3%
Fixed Income - U.S.	4.3% *	3.7%	0.6%
Fixed Income - Foreign	-8.4%	-8.9%	0.5%
Real Estate	52.5%	19.2%	33.3%
AIM	22.9%	18.0%	4.9%
Total	11.1%	8.9%	2.2%

* Includes high yield, mortgages, and cash

Compared to its peers over the last five years, CalPERS ranks at the 81st percentile with an Implementation Value Added of 1.0% annualized – the peer average was 0.6%. This return was earned over and above the asset allocation policy returns earned through the implementation of CalPERS investment policy.

Risk

Risk in this case represents the variability of the Implementation Value Added return. CalPERS has generally exceeded its peers in Implementation Value Added over the last five years with marginally higher risk. CalPERS Implementation Value Added risk has averaged 1.4% over the past five years while the median peer had risk of 1.3%.

Cost

For 2005, CalPERS was in the positive value added, low cost quadrant of CEM's Cost Effectiveness Chart. CalPERS' total operating cost for the investment program of 23.3 basis points for 2005 ranks in the 44th percentile, relative to its peers' average cost of 26.3 basis points. Total costs decreased slightly from 2004 as a result of greater use of lower cost passive/internal implementation methods. CalPERS' lower exposure to external active managers added 3.1 basis point of value relative to its peers. Total costs incurred for the year were approximately \$455 million.

Conclusion

For 2005, CalPERS posted positive gains and performed well versus its peers, slightly outperforming the median and average in terms of total return. Although utilizing a similar asset allocation policy as its peers, CalPERS distinguished itself with individual asset class performance that exceeded many of its peers. Its risk level and costs compared favorably to its peers. CalPERS spent 23 basis points of its assets in expenses last year without taking excessive risk versus its peers.